

REMARKS

In the Office Action dated January 10, 2008 (the "Office Action,") claims 2-4 were objected to as being dependent upon a rejected base claim, but were found to be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Claims 1-20 and 37-38 were rejected under 35 U.S.C. 112, second paragraph, as being indefinite. Claims 1-20 and 37-38 were also rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential elements. Claims 12-19 were found to be not sufficiently precise for combining two different statutory classes of invention in a single claim. Claims 1-20 and 37-38 were rejected under 35 U.S.C. § 101 for being directed to non-statutory subject matter. Claims 1, 5-11 and 37-38 were rejected under 35 U.S.C. 103(a) as being unpatentable over Magill et al. (U.S. Patent Application Publication No. 2004/0143542, hereinafter "Magill") in view of Gianakouros et al. (U.S. Patent 7,035,819 B1, hereinafter "Gianakouros.") Claims 12-20 were rejected under 35 U.S.C. 103(a) as being unpatentable over Magill in view of Gianakouros in view of Lupien et al. (U.S. Patent No. 5,689,652, hereinafter "Lupien.").

Applicants respectfully traverse each of these rejections and request reconsideration of the above referenced application in light of the Remarks that follow.

The undersigned's Remarks are preceded by related comments of the Examiner, presented in small bold-faced type font.

Claim Objections

Claims 2-4 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Office Action, pg. 13.

As an initial matter, Applicants wish to thank the Examiner for the indication of allowability of dependent claims 2-4. In response, Applicants have rewritten claims 2-4 in independent form including all of the limitations of claim 1. As a result of this conversion, the dependency of claims 5-10 and 12 has also been amended, so that the mentioned claims are now dependent also on claims 2-4.

Claim Rejections - 35 USC § 112

Claims 1-20 and 37-38 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Independent claims 1 and 37-38 recite the limitation "NBBO price range". It is not clear what the applicants mean by the term "NBBO price range". It is also not clear if "NBBO price range" is the same as "NBBO range". Appropriate clarification/correction is required.

Office Action, pg. 2.

Applicants respectfully submit that one of skill in the art would understand the term "NBBO price range" as defined in Applicants' Specification. Applicants have nevertheless amended claims 1, 37 and 38 to incorporate suitable claim language in the body of the claim to that effect. Thus, Applicants respectfully submit that this rejection is overcome.

Claims 1-20 and 37-38 are also rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential elements, such omission amounting to a gap between the elements. See MPEP § 2172.01. The omitted elements are: the source of a buy order, sell order and NBBO price range. Independent claims 1 and 37-38 recite in the preamble "a buy order having a buy order price and a sell order having a sell order price". It is not clear where these prices are coming from. Are these prices stored in a memory from which they are retrieved or are they received online or from some other source? Without this critical step the scope of the claims remains unclear. Also it is also not clear how the NBBO price range is identified. Appropriate clarification/correction is required. The dependent claims are rejected by way of dependency on a rejected independent claim. In the system claim, the relationship between the source of the missing elements and the processor needs to be identified.

Office Action, pg. 2-3.

It is respectfully submitted that the grounds on which the Office Action is basing this rejection are unclear to Applicants. Applicants respectfully submit that the MPEP portion cited in relation to the 35 U.S.C. 112, second paragraph rejection states the following:

*In addition, a claim which fails to interrelate essential elements of the invention as defined by applicant(s) in the specification may be rejected under 35 U.S.C. 112, second paragraph, for failure to point out and distinctly claim the invention. See *In re Venezia*, 530 F.2d 956, 189 USPQ 149 (CCPA 1976); *In re Collier*, 397 F.2d 1003, 158 USPQ 266 (CCPA 1968). >But see *Ex parte Nolden*, 149 USPQ 378, 380 (Bd. Pat. App. 1965) ("[I]t is not essential to a patentable combination that there be interdependency between the elements of the claimed device or that all the elements operate concurrently toward the desired result"); *Ex parte Huber*, 148 USPQ 447, 448-49 (Bd. Pat. App. 1965) (A claim does not necessarily fail to comply with 35 U.S.C. 112, second paragraph where the various elements do not function simultaneously, are not*

directly functionally related, do not directly intercooperate, and/or serve independent purposes.)
MPEP, § 2172.01 (emphasis added).

It is respectfully submitted that it is unclear to Applicants where in the Specification there is a qualification of the sources of the buy and sell orders as well as the sources of the NBBO range as “essential” elements of the invention. The sources of the buy and sell orders as well as the sources of the NBBO range are necessary for the implementation of the invention just as for example a source of power is necessary for any computer implemented method to function. A computer without power will not be able to execute any steps. However, one of skill in the art would undoubtedly know that and thus, this level of detail is not necessary to be disclosed in a specification or be part of a claim. Similarly, Applicants respectfully submit that the scope of the claim is clear to a hypothetical person possessing the ordinary level of skill in the pertinent art. One of skill in the art would be able to recognize that the source of the orders and the NBBO range can be received through a computer network, or for example, from a local user interface without changing the nature of the invention and its novelty. In fact, Applicants respectfully refer to for example, one of the references cited in the Office Action: the issued patent to Gianakouros (see for example col. 8, lines 34-39 with regards to the orders and col. 12, lines 9-14 for the NBBO). In the absence of a delimitation of what the source of the orders and the NBBO range should be, one of skill in the art would understand that the sources could be of diverse nature. Thus, Applicants respectfully request that this rejection be withdrawn.

Claims 12-19 are not sufficiently precise due to the combining of two different statutory classes of invention in a single claim. Claim 12 is dependent on a method, but the body of the claim discusses the specifics of a system (a crossing network for matching said buy order and said sell order). A claim is considered indefinite if it does not apprise those skilled in the art of its scope. *Amgen, Inc. v. Chugai Pharm. Co.*, 927 F.2d 1200, 1217 (Fed. Cir. 1991).

Office Action, pg. 3.

Applicants respectfully submit that this rejection is moot in view of the amendment of claims 12 and 17 submitted herewith. Claims 12 and 17 have been amended to recite additional steps. Claims 13-16 and 18-19 depend directly or indirectly from claim 12, and define further features and steps of the method. Accordingly, these claims are patentable for at least same the

reasons noted with respect to claims 12 and 17, as well as for the additional features recited therein.

Claim Rejections - 35 USC § 101

Claims 1-20 and 37-38 are rejected under 35 U.S.C. § 101 because the claimed invention is directed to non-statutory Subject matter.

35 USC 101 requires that in order to be patentable the invention must be a “new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof”.

Claims 1-20 and 37-38 are drawn to “a method, a system and a computer readable storage medium storing instructions for matching a buy order having a buy order price and a sell order having a sell order price, the method including the steps of “identifying an NBBO price range; determining if said buy order price and said sell order price are within said NBBO range; determining if said buy order price is not less than said sell order price; calculating a midpoint between said buy order price and said sell order price; and only matching said buy order and said sell order at said midpoint if said buy order price is not less than said sell order price and said buy order price and said sell order price are within said NBBO range”. As such the claimed invention is directed to a judicial exception to 35 U.S.C. 101 (i.e., an abstract idea, natural phenomenon, or law of nature) and is not directed to a practical application of such judicial exception because the claims do not require any physical transformation and the invention as claimed does not produce a useful, concrete, and tangible result.

The Court of Appeals for the Federal Circuit issued opinions in *State Street Bank & Trust Co. v. Signature Financial Group Inc.*, 149 F.3d 1368, 47 USPQ2d 1596 (Fed. Cir. 1998) and *AT&T Corp. v. Excel Communications, Inc.*, 172 F.3d 1352, 50 USPQ2d 1447 (Fed. Cir. 1999). These decisions explained that, to be eligible for patent protection, the claimed invention as a whole must accomplish a practical application. That is, it must produce a “useful, concrete and tangible result.” *State Street*, 149 F.3d at 1373-74, 47 USPQ2d at 1601 02. To satisfy section 101 requirements, the claim must be for a practical application of the § 101 judicial exception, which can be identified in various ways: (a) The claimed invention “transforms” an article or physical object to a different state or thing. (b) The claimed invention otherwise produces a useful, concrete and tangible result, based on the factors discussed below.

The USPTO’s official interpretation of the utility requirement provides that the utility of an invention has to be (i) specific, (ii) substantial and (iii) credible. See MPEP § 2107. It is not clear as to what is the specific, substantial and credible utility of the claimed invention.

The tangible requirement does require that the claim must recite more than a § 101 judicial exception, in that the process claim must set forth a practical application of that § 101 judicial exception to produce a real-world result. *Benson*, 409 U.S. at 71-72, 175 USPQ at 676-77 (invention ineligible because had “no substantial practical application”). It is not clear as to what is the tangible result of the claimed invention. For an invention to produce a “concrete” result, the process must have a result that can be substantially repeatable or the process must substantially produce the same result again. In *re Swartz*, 232 F.3d 862, 864, 56 USPQ2d 1703, 1704 (Fed. Cir. 2000) (where asserted result produced by the claimed invention is “irreproducible” claim should be rejected under section 101). The opposite of “concrete” is unrepeatable or unpredictable. The steps of the claimed invention are not clear and specific enough

to guarantee that the same results will be produced for a given set of inputs. It is not clear as to what is the concrete result of the claimed invention. In view of the ambiguities identified in the 35 USC 112, second paragraph rejections above it is not clear if the results of the claimed invention are repeatable or predictable

There is no useful, concrete and tangible result produced from implementing the steps of the claimed invention. The dependent claims are rejected for the same reason and by way of dependency on a rejected independent claim.

Office Action, pg. 3-5.

As an initial matter, Applicants respectfully disagree with the statement in the Office Action that the invention claimed in claims 1, 37 and 38 is directed to non-statutory subject matter for being an abstract idea, natural phenomenon, or law of nature. Applicants respectfully submit that the steps of the method of claim 1 are implemented using a computer, as recited in the claim. Claim 37 is drawn to a computer system, and claim 38 is drawn to a computer-readable medium encoded with a computer program. Applicants respectfully submit that it is clear that claims 1, 37 and 38 are drawn to subject matter that falls within one of the four statutory categories according to the MPEP's guidelines:

Claim 1:

When a computer program is claimed in a process where the computer is executing the computer program's instructions, USPTO personnel should treat the claim as a process claim.

MPEP, § 2106.01, I.

Claim 38:

When a computer program is recited in conjunction with a physical structure, such as a computer memory, USPTO personnel should treat the claim as a product claim.

MPEP, § 2106.01, I.

Claim 39:

[A] claimed computer-readable medium encoded with a computer program is a computer element which defines structural and functional interrelationships between the computer program and the rest of the computer which permit the computer program's functionality to be realized, and is thus statutory. See Lowry, 32 F.3d at 1583-84, 32 USPQ2d at 1035.

MPEP, § 2106.01, I.

Applicants respectfully disagree with the statement in the Office Action that "the claims do not require any physical transformation and the invention as claimed does not produce a useful, concrete, and tangible result". Applicants respectfully note that the Office Action quotes the language of the claims to support the statement that the claimed invention is directed to a

judicial exception to 35 USC 101. However, such quoted language is an incomplete citation that leaves out the elements of the claimed invention the Office Action argues are not present, namely “[a] **computer-implemented method** for matching a buy order having a buy order price and a sell order having a sell order price, comprising the steps of (...) **said steps being implemented using at least one computer**” (Applicants’ claim 1). Applicants respectfully submit that such omission is a fundamental flaw in the reasoning in the Office Action. One of the opinions cited in the Office Action states the following:

Today, we hold that the transformation of data, representing discrete dollar amounts, by a machine through a series of mathematical calculations into a final share price, constitutes a practical application of a mathematical algorithm, formula, or calculation, because it produces “a useful, concrete and tangible result” – a final share price momentarily fixed for recording and reporting purposes and even accepted and relied upon by regulatory authorities and in subsequent trades.

State Street Bank & Trust Co. v. Signature Financial Group Inc., 149 F. 3d 1373, 47 USPQ2d 1601 (Fed. Cir. 1998).

Relying on the same case law cited by the Office Action, Applicants similarly conclude that the transformation of data, representing order prices (i.e. discrete dollar amounts), by a machine through a series of mathematical calculations into a final matching price, constitutes a practical application of a mathematical algorithm, formula, or calculation, because it produces “a useful, concrete and tangible result”. This reasoning applies not only to the method claims, but also to the system claims and computer readable storage medium claims. One of skill in the financial field would recognize that producing a match between a buy and a sell order is a concrete, tangible and useful result for an investor, whose order would otherwise would remain unmatched, potentially leading to an equally concrete and tangible financial loss.

One of skill in the art would also undoubtedly recognize the credibility of the utility of the invention. With regards to credibility, the MPEP provides the following guidelines:

(B) Review the claims and the supporting written description to determine if the applicant has asserted for the claimed invention any specific and substantial utility that is credible:

(1) If the applicant has asserted that the claimed invention is useful for any particular practical purpose (i.e., it has a “specific and substantial utility”) and the assertion would be considered credible by a person of ordinary skill in the art, do not impose a rejection based on lack of utility.

MPEP, § 2107, II, (B).

In addition, Applicants respectfully submit that the Office Action has not made a prima facie showing that the invention lacks utility, as the Office Action has not provided either documentary evidence to support the factual basis for the prima facie showing of no specific and substantial credible utility nor a specific explanation of the scientific basis for this factual conclusion. As the MPEP states:

To properly reject a claimed invention under 35 U.S.C. 101, the Office must (A) make a prima facie showing that the claimed invention lacks utility, and (B) provide a sufficient evidentiary basis for factual assumptions relied upon in establishing the prima facie showing.

MPEP, § 2107.2, IV.

The prima facie showing must be set forth in a well-reasoned statement. Any rejection based on lack of utility should include a detailed explanation why the claimed invention has no specific and substantial credible utility. Whenever possible, the examiner should provide documentary evidence regardless of publication date (e.g., scientific or technical journals, excerpts from treatises or books, or U.S. or foreign patents) to support the factual basis for the prima facie showing of no specific and substantial credible utility. If documentary evidence is not available, the examiner should specifically explain the scientific basis for his or her factual conclusions.

MPEP, § 2107.2, IV.

Applicants respectfully submit that the invention as claimed not only has specific and substantial utility (i.e., a computer implemented method, computer system or computer storage medium with instructions for matching buy and sell orders) and is credible, but one of ordinary skill in the art would immediately appreciate the utility of the invention based on its characteristics. Moreover, one of ordinary skill in the art would recognize that the method will produce repeatable results, given the same set of premises. As the method comprises variables, the results will vary depending on the values inputted; however, given the same inputted values, the results will always be the same (i.e., the results are predictable).

Thus, for at least the foregoing reasons, Applicants respectfully request that the 35 § U.S.C. §101 be withdrawn.

Applicant's claims 12-19 are intended to embrace or overlap two different statutory classes of invention as set forth in 35 § U.S.C. §101. Claim 12 depends on claim 1 which is a method claim. However claim sets out by claiming a system element namely a crossing network for matching said buy order and said sell order. (See rejection of claims under 35 U.S.C. §112, second paragraph, for specific details regarding this issue). "A claim of this type is precluded by express language of 35

U.S.C. §101 which is drafted so as to set forth statutory the statutory classes of invention in the alternative only”, Ex parte Lyell (17USPQ2d 1548).

Office Action, pg. 5-6.

Applicants respectfully submit that this rejection is moot in view of the amendment of claims 12 and 17 (from which claims 13-16 and 18-19 depend from) submitted herewith and as discussed above in response to the 35 U.S.C. §112, second paragraph rejection of these claims.

Claim Rejections - 35 USC § 103

Claims 1, 5-11 and 37-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Magill et al. (US Pub. No.2004/0143542) in view of Gianakouros et al. (US Patent 7,035,819 B1).

Claims 1 and 37-38, Magill discloses a method, a system and computer readable storage medium storing instructions for matching a buy order having a buy order price and a sell order having a sell order price comprising the steps of: identifying an NBBO price range (See Magill paragraph 85; nationally disseminated best bid/ask); calculating a midpoint between said buy order price and said sell order price (See Magill paragraph 85).

Magill does not explicitly disclose determining if said buy order price and said sell order price are within said NBBO range; determining if said buy order price is not less than said sell order price; and matching said buy order and said sell order at said midpoint if said buy order is not less than said sell order price and said buy order price and said sell order price are within said NBBO range.

Gianakouros disclosed the steps wherein a determination is made as to whether the buy order price and sell order price are within an NBBO range (Column 1 lines 53-56 and Column 33 line 64- Column 4 line 5, “Retail Marketable Orders.”).

It would have been obvious to one of ordinary skill in the art to modify Magill in view of Gianakouros so that the participants in the system receive a higher degree, on a average, of price improvement. In requiring that orders are within the NBBO range, the system decreases the odds of outlier bids being place and increases the overall liquidity of the system. A motivation to combine is that the overall liquidity of the method is enhanced which in turn increases the speed of execution.

Both of the references do not explicitly disclose determining if said buy order price is not less than said sell order price.

Official Notice is taken that this step is well known to price improvement systems. It therefore would have been obvious to one of ordinary skill in the art to modify Magill to include this step, so that both parties to the transaction receive equitable treatment.

Response to Arguments

Applicant’s arguments with respect to pending claims have been considered but are moot in view of the new ground(s) of rejection. In terms motivation to combine the references, the motivation to combine as discussed in the rejection would have been obvious to one of ordinary skill in the art.

Office Action, pg. 2-3 (emphasis added).

The Office Action qualifies the arguments previously presented by Applicants in the response filed on June 22, 2007 to the Final Office Action dated March 22, 2007 (the "Final Office Action") as moot in view of the "new" grounds of rejection. Applicants respectfully disagree with the statement in the Office Action that the grounds of rejection are new. While Applicants are aware that the 35 U.S.C. 101 and 35 U.S.C. 112, second paragraph rejections presented in this Office Action are new, the grounds of the 35 U.S.C. 103(a) rejection presented in this Office Action are not new. In fact, they are almost word for word the same as those previously presented in the Final Office Action:

Applicants respectfully submit that Applicants' arguments traversing the Final Office Action's 35 U.S.C. 103(a) rejection are not moot and remain unaddressed. Applicants respectfully request that the arguments presented to traverse the 35 U.S.C. 103(a) rejection in response to the Final Office Action be considered and answered in compliance with the MPEP (MPEP, § 707.07(f), § 7.37).

The arguments that were made in response to the 35 U.S.C. 103(a) rejections and that have not been addressed are in essence reproduced here:

With regards to claim 1, Applicants respectfully traverse the Examiner's rejection. Applicants respectfully submit that the Examiner has not established a prima facie case of obviousness because there is no motivation to modify or combine the reference teachings and even if the references were combined, none of the prior art references, alone or in combination, describe or suggest all of the claimed limitations of claim 1.

(a) Even if the references were combined, none of the prior art references, alone or in combination, describe or suggest all of the claimed limitations of the present invention:

Even if Magill and Gianakouros were combined, none of the references, alone or in combination, describe or suggest all of the claimed limitations of at least independent claim 1. As the Office Action has recognized, Magill does not explicitly disclose: a) determining if said buy order price and said sell order price are within said NBBO range, b) determining if said buy

order price is not less than said sell order price, and c) only matching said buy order and said sell order at said midpoint if said buy order is not less than said sell order price and said buy order price and said sell order price are within said NBBO range. Applicants respectfully submit that Gianakouros does not cure Magill's defects, as Gianakouros also does not teach at least limitations a) determining if said buy order price and said sell order price are within said NBBO range, and c) only matching said buy order and said sell order at said midpoint if said buy order is not less than said sell order price and said buy order price and said sell order price are within said NBBO range, as will be shown below.

The Office Action cites to Gianakouros as disclosing "the steps wherein a determination is made as to whether the buy order price and sell order price are within an NBBO range (Column 1 lines 53-56 and Column 3 line 64- Column 4 line 5, "Retail Marketable Orders.")" (Office Action, pg. 7). Applicants respectfully submit that neither of the passages cited by the Office Action teach "determining if said buy order price and said sell order price are within said NBBO range". The first cited passage recites:

"Retail marketable orders" consist of post-open market orders and marketable limit orders (that is, buy limit orders priced at or above the current best offer, and sell limit orders priced at or below the current best bid), which are generally executed immediately at prevailing best bids or offers.

Gianakouros, Col. 1, lines 53-56.

Applicants respectfully submit that said passage does not teach a step of "determining if said buy order price and said sell order price are within said NBBO range" as part of a computer-implemented order matching method as recited in claim 1.

The second cited passage recites:

In an embodiment of the present invention, both retail marketable orders and offsetting institutional indications can be executed at prices inside the quoted NBBO spread (that is, at prices between the national best bid and national best offer). In this embodiment, retail brokerage firms would, through the use of the System, provide their customers with executions evidencing, on average, a high degree of "price improvement" relative to other market centers.

Gianakouros, Col. 3, line 64- Col. 4, line 5, emphasis added.

This passage also does not teach a step of “determining if said buy order price and said sell order price are within said NBBO range” nor that such determination would be made with at least one computer. The passage simply states that both retail marketable orders and offsetting institutional indications can be executed at prices inside the quoted NBBO spread.

Gianakouros teaches a system that collects “binding indications of interest to buy and sell specific equity securities at passively determined, non-discrete prices” (Gianakouros, col. 3, lines 29-32.) The indications submitted to Gianakouros’ system, may be optionally entered with a price limit:

It should be noted that price limits for indications are strictly optional and they are included and specified at the sole discretion of institutional clients submitting indications.

Gianakouros, Col. 4, lines 63-65.

In the case of binding indications of interest to buy or sell specific equity securities submitted to the system without an associated price limit, Gianakouros teaches that they represent the submitting institution's willingness to trade at the midpoint of the NBBO (whatever this price happens to be):

An indication submitted without an associated price limit would simply represent the submitting institution's willingness to trade at the midpoint of the NBBO (whatever this price happens to be) on the specified side of the specified symbol up to the specified number of shares.

Gianakouros, Col. 4, line 66 – Col. 5, line 3.

By contrast, Applicants’ claim 1 requires “calculating a midpoint between said buy order price and said sell order price” and “only matching said buy order and said sell order at said midpoint if said buy order price is not less than said sell order price and said buy order price and said sell order price are within said NBBO range.” Gianakouros makes no such determinations and proceeds to matching the orders at the midpoint of the NBBO range. This method as taught by Gianakouros does not show how to take into consideration the investors’ interests and offer an improved matching price as in the present invention.

Next, Gianakouros describes two examples of how the system handles indications submitted to the system with an associated price limit. Gianakouros teaches that if the submitted indication is to buy shares, and the price limit associated with it is higher than the NBBO's midpoint, then the transaction will be executed at the midpoint of the NBBO. Gianakouros also teaches that if the submitted indication is to buy shares, and the price limit associated with it is lower than the NBBO midpoint, then the transaction will not take place:

Transactions on the System are also subject to any limits specified by the submitting institution governing the maximum or minimum price at which it is willing to transact. For example, an institutional indication to buy 50,000 shares of IBM "up to" $132^{1/4}$ signifies the submitting institution's willingness to buy up to a total of 50,000 shares of IBM at the (variable) midpoint of the NBBO, as long as it never transacts at a price greater than $132^{1/4}$. This indication would therefore be "active" when, for example, the NBBO for IBM is $131^{5/8}$.times. $131^{3/4}$ (in which market the institution would buy from counter-parties at $131^{11/16}$, the market midpoint), but would be "inactive" when, for example, the NBBO for IBM is $132^{3/8}$.times. $132^{1/2}$ (since the midpoint of this market, $132^{7/16}$, exceeds the institutional indication's price limit of $132^{1/4}$). An inactive indication present in the System would not result in any trades, just as if the indication did not exist at all.

Gianakouros, Col. 4, line 29 – 63.

Applicants respectfully submit that the above example does not teach the step of “determining if said buy order price and said sell order price are within said NBBO range”. Gianakouros focuses on the price limit's position with respect to the NBBO's midpoint.

In addition, Applicants respectfully submit that Gianakouros' system may not serve the investors' interests as well as the system of the present invention since in Gianakouros, if a price limit to buy is submitted and it is higher than the NBBO's midpoint, the matching will occur at the midpoint of the NBBO, regardless of the limit price of the buy order or the limit price of the sell order. As opposed to Gianakouros' system, Applicants' claim 1 requires “calculating a midpoint between said buy order price and said sell order price” and “only matching said buy order and said sell order at said midpoint if said buy order price is not less than said sell order price and said buy order price and said sell order price are within said NBBO range.” This means that if both the buyer and the seller set limit prices, and the buy order price is not less than

the sell order price, then the trade will not execute unless it is determined that the buy limit price and the sell limit price are within the NBBO range. This may afford some pricing protection to buyer and seller.

Gianakouros also teaches that when transactions occur between institutional clients and retail investors, orders and indications will be matched at a point within the NBBO spread other than the NBBO midpoint, in order to provide order flow remuneration to the retail brokerage firm:

Although a variety of execution-price protocols are possible, in one embodiment of the present invention, one quarter of the NBBO spread for each retail share executed on the System against an institutional indication will accrue to the end retail investor in the form of "guaranteed" price improvement (that is, retail investors whose orders are executed on the System would always buy at a price 1/4 spread lower than the national best offer and sell at a price 1/4 spread higher than the national best bid), and that another quarter of the NBBO spread will accrue to the originating retail brokerage firm pursuant to a revenue-sharing arrangement. The remaining 50% of the NBBO spread will always go to the institutional client in the form of a midpoint execution. The System will generate proprietary revenue (which is not expected to be re-distributed to brokerage partners as order flow remuneration) by charging these institutional clients a per-share commission for trades on the System.

Gianakouros, Col. 13, line 61 – Col. 14, line 12 (see also Gianakouros, Example 1 Col. 14, line 17 – Col. 15, line 18).

Such an approach however, is very different from the claimed invention for the same reasons discussed above.

For the foregoing reasons, Applicants respectfully submit that Gianakouros does not teach or suggest the limitations of Applicants' claim 1.

In reference to the combination of the Magill and Gianakouros teachings, the Office Action states that "[i]n requiring that orders are within the NBBO range, the system decreases the odds of outlier bids being placed and increases the overall liquidity of the system" (emphasis added.) However, Applicants respectfully submit that Gianakouros does not require that binding orders and indications be associated with price limits that are within the NBBO range in order to match. In Gianakouros, for example, a buy order with a limit price of $132\frac{1}{4}$ is "active" and may

be matched even though that price is greater than the National Best Offer price of 1313/4 (Col. 4, lines 47-57, and Col. 14, line 21 – Col. 15, line 18), as just discussed.

Thus, Applicants respectfully submit that neither Magill nor Gianakouros teach or suggest the limitations of Applicants' claim 1.

(b) There is no motivation to modify or combine the reference teachings:

The Examiner has provided the following arguments to support his statement that it would have been obvious to a person of ordinary skill in the art to modify Magill in view of Gianakouros:

It would have been obvious to one of ordinary skill in the art to modify Magill in view of Gianakouros so that the participants in the system receive a higher degree, on average, of price improvement. In requiring that orders are within the NBBO range, the system decreases the odds of outlier bids being placed and increases the overall liquidity of the system. A motivation to combine is that the overall liquidity of the method is enhanced which in turn increases the speed of execution.

Both of the references do not explicitly disclose determining if said buy order price is not less than said sell order price.

Official Notice is taken that this step is well known to price improvement systems. It therefore would have been obvious to one of ordinary skill in the art to modify Magill to include this step, so that both parties to the transaction receive equitable treatment.

Office Action, pg. 7.

As an initial matter, Applicants respectfully submit that the teaching or suggestion to make the claimed combination is not found at least in either Magill or Gianakouros. In fact, Applicants respectfully submit that for the reasons detailed in section a), Gianakouros teaches in a different direction (i.e. "away") from at least the limitations of Applicants' claim 1 "calculating a midpoint between said buy order price and said sell order price" and "only matching said buy order and said sell order at said midpoint if said buy order price is not less than said sell order price and said buy order price and said sell order price are within said NBBO range." Therefore, Applicants respectfully submit that it would not have been obvious to a person of ordinary skill in the art to modify Magill in view of Gianakouros to obtain Applicants' method as recited in claim 1.

In addition, one of skill in the art at the time the invention was made, would not have been motivated to combine the teachings of Magill and Gianakouros, because the proposed modification of these references would change their respective principle of operation.

Thus, Applicants respectfully submit that the Examiner's conclusion that it would have been obvious to one of ordinary skill in the art is unsupported by the cited Magill and Gianakouros references.

For at least the foregoing reasons, Applicants respectfully submit that independent claim 1 is distinguishable over Magill in view of Gianakouros, and notice to the effect that this claim is in condition for immediate allowance is respectfully requested. For at least similar reasons to those provided for claim 1, claims 37 and 38 are distinguishable over Magill in view of Gianakouros, and notice to the effect that these claims are in condition for immediate allowance is respectfully requested.

Claims 5-11 depend from at least independent claim 1, and each defines further features of the method. As such, these claims are patentable for the reasons noted above with respect to claim 1, as well as for the additional features recited therein. Accordingly, notice to the effect that dependent claims 5-11 are in condition for immediate allowance is respectfully requested. Applicants respectfully note that claims 5-11 have been amended to correct the dependency of the claims. Claims 6-11 have been further amended to provide language that may be deemed more suitable to define the invention. No new matter has been added.

Claims 12-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Magill et al. (US Pub. No.2004/0143542) in view of Gianakouros et al. (US Patent 7,035,819 B1) and further in view of Lupien et al. (US Patent 5,689,652).
Office Action, pg. 10.

Claims 12 -20 depend directly or indirectly from at least independent claim 1, and each defines further features of the method. As such, these claims are patentable for at least the reasons noted above with respect to claim 1, as well as for the additional features recited therein.

Accordingly, notice to the effect that dependent claims 12 -20 are in condition for immediate allowance is respectfully requested. Applicants respectfully note that claim 12 has been amended to correct its dependency. Claim 17 has been amended to provide language that may be deemed more suitable to define the invention. No new matter has been added.

Claims 39 - 44 have been added due to the amendment of claims 6 and 7. These claims depend from claims 1-4, and each defines further features of the method. As such, these claims are patentable for the reasons noted above with respect to claims 1-4, as well as for the additional features recited therein. Accordingly, notice to the effect that dependent claims 39 - 44 are in condition for immediate allowance is respectfully requested.

CONCLUSION

Claims 1-12, 17, 37 and 38 have been amended. Claims 39-44 have been added. Claims 21-36 have been canceled. Claims 1-20 and 37-38 are now pending and believed to be in proper form for allowance. Applicants have made a diligent effort to place this application in better condition for immediate allowance and notice to this effect is earnestly solicited. The Examiner is respectfully requested to reconsider the application at an early date with a view towards issuing a favorable action thereon. If upon the review of the application, the Examiner is unable to issue an immediate notice of allowance, he is respectfully requested to telephone the undersigned attorney at (212) 895-1376 with a view towards resolving the outstanding issues.

The Commissioner is authorized to charge and fees required in connection with this submission to Deposit Account No. 50-0521.

Respectfully submitted,

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